

What is claimed is:

1. A fastener comprising:

5 (a) a substantially flat head portion comprising a first hole, the flat head comprising at least a lower side;

(b) a neck having an opening and two side neck portions, the neck extending from the lower side of the substantially flat head portion at a  
10 substantially right angle with respect to the substantially flat head portion;

(c) two substantially flat legs extending from the neck, each leg having an inner surface, the two inner surfaces of the two legs being at an initial proximity with each other, the legs being expandable in opposite directions upon  
15 inserting through the first hole an expansion member, thus bringing the expansion member to a contact region of the legs, each leg also having side leg portions;

(d) a funnel configuration in the vicinity of the contact region; and  
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(e) barbs having an origin at a region selected from the side neck portion, and the side leg portion, the barbs also having a front point which front point substantially reaches or exceeds the lower side, the barbs directed outwardly away from the legs.  
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2. A spring fastener as defined in claim 1, wherein the head portion of the fastener comprises an upper side and a lower side.

3. A spring fastener as defined in claim 1, wherein the head  
30 portion of the fastener has a single side corresponding to the lower side.

4. A spring fastener as defined in claim 1, wherein the hole is substantially round.

5 5. A spring fastener as defined in claim 1, wherein the hole comprises an oblong opening.

6. A spring fastener as defined in claim 1, wherein the fastener comprises an elastic body molded at least under the at least lower side of the  
10 head of the fastener.

7. A spring fastener as defined in claim 4, wherein the fastener comprises an elastic body molded at least under the at least lower side of the head of the fastener.  
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8. A spring fastener as defined in claim 1, wherein the first hole is engageable to the expansion member.

9. A spring fastener as defined in claim 1, wherein the fastener comprises at least one region under the at least lower side, which region is  
20 engageable to the expansion member.

10. A spring fastener as defined in claim 2, wherein the fastener comprises at least one region under the at upper side of the head, which region  
25 is engageable to the expansion member.

11. An assembly comprising a first part and a fastener,

the first part having an upper surface and a lower surface, a slot commensurate to the fastener, the slot having a length, a width, lower edges, upper edges, and side edges, along its length;

5 (a) a substantially flat head portion comprising a first hole, the flat head comprising at least a lower side;

(b) a neck having an opening and two side neck portions, the neck extending from the lower side of the substantially flat head portion at a  
10 substantially right angle with respect to the substantially flat head portion;

(c) two substantially flat legs extending from the neck, each leg having an inner surface, the two inner surfaces of the two legs being at an initial proximity with each other, the legs being expandable in opposite directions upon  
15 inserting through the first hole an expansion member, thus bringing the expansion member to a contact region of the legs, each leg also having side leg portions;

(d) a funnel configuration in the vicinity of the contact region; and  
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(e) barbs having an origin at a region selected from the side neck portion, and the side leg portion, the barbs directed outwardly away from the legs, the barbs also having a front point which front point is substantially disposed above the lower surface of the first part and above the lower edges of  
25 the slot.

12. An assembly as defined in claim 11, wherein the head portion of the fastener comprises an upper side and a lower side.

13. An assembly as defined in claim 11, wherein the head portion of the fastener has a single side corresponding to the lower side.

14. An assembly as defined in claim 1, wherein the hole is  
5 substantially round.

15. An assembly as defined in claim 11, wherein the hole comprises an oblong opening.

10 16. An assembly as defined in claim 11, wherein the fastener comprises an elastic body molded at least under the at least lower side of the head of the fastener.

15 17. An assembly as defined in claim 14, wherein the fastener comprises an elastic body molded at least under the at least lower side of the head of the fastener.

18. An assembly as defined in claim 11, wherein the first hole is engageable to the expansion member.

20 19. An assembly as defined in claim 11, wherein the fastener comprises at least one region under the at least lower side, which region is engageable to the expansion member.

25 20. An assembly as defined in claim 12, wherein the fastener comprises at least one region under the at upper side of the head, which region is engageable to the expansion member.

21. A fastener comprising:

(a) a substantially flat head portion comprising a first hole, the flat head comprising at least a lower side;

5 (b) a neck having an opening and two side neck portions, the neck extending from the lower side of the substantially flat head portion at a substantially right angle with respect to the substantially flat head portion;

(c) two substantially flat legs extending from the neck, each leg  
10 having an inner surface, the two inner surfaces of the two legs being at an initial proximity with each other, the legs being expandable in opposite directions upon inserting through the first hole an expansion member, thus bringing the expansion member to a contact region of the legs, each leg also having side leg portions;

15 (d) a funnel configuration in the vicinity of the contact region; and

(e) barbs having a front point and an origin at a region selected from the lower head side, the side neck portion, and the side leg portion, the  
20 barbs being directed outwardly away from the legs and then inwardly toward the legs.

22. A spring fastener as defined in claim 21, wherein the head portion of the fastener comprises an upper side and a lower side.

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23. A spring fastener as defined in claim 21, wherein the head portion of the fastener has a single side corresponding to the lower side.

24. A spring fastener as defined in claim 21, wherein the hole is  
30 substantially round.

25. A spring fastener as defined in claim 21, wherein the hole comprises an oblong opening.

5                    26. A spring fastener as defined in claim 21, wherein the fastener comprises an elastic body molded at least under the at least lower side of the head of the fastener.

10                   27. A spring fastener as defined in claim 24, wherein the fastener comprises an elastic body molded at least under the at least lower side of the head of the fastener.

15                   28. A spring fastener as defined in claim 21, wherein the first hole is engageable to the expansion member.

29. A spring fastener as defined in claim 21, wherein the fastener comprises at least one region under the at least lower side, which region is engageable to the expansion member.

20                   30. A spring fastener as defined in claim 22, wherein the fastener comprises at least one region under the at upper side of the head, which region is engageable to the expansion member.

25                   31. A spring fastener as defined in claim 21, wherein the outwardly and inwardly portions of the barbs have an angle, which angle is adequately large to allow the fastener to be removed from the first part without destruction of said fastener or said first part, when the removal takes place solely from the side of the first part, wherein the head of the fastener is positioned.

30                   32. An assembly comprising a first part and a fastener,

the first part having an upper surface and a lower surface, a slot commensurate to the fastener, the slot having a length, a width, lower edges, upper edges and side edges, along its length;

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the fastener being inserted into the slot and comprising:

(a) a substantially flat head portion comprising a first hole, the flat head comprising at least a lower side;

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(b) a neck having an opening and two side neck portions, the neck extending from the lower side of the substantially flat head portion at a substantially right angle with respect to the substantially flat head portion;

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(c) two substantially flat legs extending from the neck, each leg having an inner surface, the two inner surfaces of the two legs being at an initial proximity with each other, the legs being expandable in opposite directions upon inserting through the first hole an expansion member, thus bringing the expansion member to a contact region of the legs, each leg also having side leg portions;

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(d) a funnel configuration in the vicinity of the contact region; and

(e) barbs having a front point and an origin at a region selected from the lower side of the head portion, the side neck portion, and the side leg portion, the barbs being directed outwardly away from the legs and then inwardly toward the legs, the barbs also having sliding portions in contact with at least one of the lower, upper, and side edges of the slot.

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33. An assembly as defined in claim 32, wherein the head portion of the fastener comprises an upper side and a lower side.

34. An assembly as defined in claim 32, wherein the head portion of the fastener has a single side corresponding to the lower side.

5                    35. An assembly as defined in claim 32, wherein the hole is substantially round.

36. An assembly as defined in claim 32, wherein the hole comprises an oblong opening.

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37. An assembly as defined in claim 32, wherein the fastener comprises an elastic body molded at least under the at least lower side of the head of the fastener.

15                    38. An assembly as defined in claim 35, wherein the fastener comprises an elastic body molded at least under the at least lower side of the head of the fastener.

39. An assembly as defined in claim 32, wherein the first hole is  
20 engageable to the expansion member.

40. An assembly as defined in claim 32, wherein the fastener comprises at least one region under the at least lower side, which region is engageable to the expansion member.

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41. An assembly as defined in claim 33, wherein the fastener comprises at least one region under the at upper side of the head, which region is engageable to the expansion member.



42. An assembly as defined in claim 32, wherein the outwardly and inwardly portions of the barbs have an angle, which angle is adequately large to allow the fastener to be removed from the first part without destruction of said fastener or said first part, when the removal takes place solely from the side of the first part, wherein the head of the fastener is positioned.

43. A vehicle comprising a first part having a slot and a second part having a hole, the two parts connected with a fastener, the fastener comprising:

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(a) a substantially flat head portion comprising a first hole, the flat head comprising at least a lower side;

(b) a neck having an opening and two side neck portions, the neck extending from the lower side of the substantially flat head portion at a substantially right angle with respect to the substantially flat head portion;

(c) two substantially flat legs extending from the neck, each leg having an inner surface, the two inner surfaces of the two legs being at an initial proximity with each other, the legs being expandable in opposite directions upon inserting through the first hole an expansion member, thus bringing the expansion member to a contact region of the legs, each leg also having side leg portions;

(d) a funnel configuration in the vicinity of the contact region; and

(e) barbs having an origin at a region selected from the side neck portion, and the side leg portion, the barbs also having a front point which front point substantially reaches or exceeds the lower side, the barbs directed outwardly away from the legs.

44. A vehicle comprising an assembly, the assembly comprising a first part and a fastener,

5 the first part having an upper surface and a lower surface, a slot commensurate to the fastener, the slot having a length, a width, lower edges, upper edges, and side edges, along its length;

(a) a substantially flat head portion comprising a first hole, the flat  
10 head comprising at least a lower side;

(b) a neck having an opening and two side neck portions, the neck extending from the lower side of the substantially flat head portion at a substantially right angle with respect to the substantially flat head portion;

15 (c) two substantially flat legs extending from the neck, each leg having an inner surface, the two inner surfaces of the two legs being at an initial proximity with each other, the legs being expandable in opposite directions upon inserting through the first hole an expansion member, thus bringing the  
20 expansion member to a contact region of the legs, each leg also having side leg portions;

(d) a funnel configuration in the vicinity of the contact region; and

25 (e) barbs having an origin at a region selected from the side neck portion, and the side leg portion, the barbs directed outwardly away from the legs, the barbs also having a front point which front point is substantially disposed above the lower surface of the first part and above the lower edges of the slot.

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45. A vehicle comprising a first part having a slot and a second

part having a hole, the two parts connected with a fastener, the fastener comprising:

5 (a) a substantially flat head portion comprising a first hole, the flat head comprising at least a lower side;

(b) a neck having an opening and two side neck portions, the neck extending from the lower side of the substantially flat head portion at a substantially right angle with respect to the substantially flat head portion;

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(c) two substantially flat legs extending from the neck, each leg having an inner surface, the two inner surfaces of the two legs being at an initial proximity with each other, the legs being expandable in opposite directions upon inserting through the first hole an expansion member, thus bringing the  
15 expansion member to a contact region of the legs, each leg also having side leg portions;

(d) a funnel configuration in the vicinity of the contact region; and

20 (e) barbs having a front point and an origin at a region selected from the lower head side, the side neck portion, and the side leg portion, the barbs being directed outwardly away from the legs and then inwardly toward the legs.

25 46. A vehicle comprising an assembly of a first part with a slot, and a fastener within the slot, the fastener comprising:

(a) a substantially flat head portion comprising a first hole, the flat head comprising at least a lower side;

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(b) a neck having an opening and two side neck portions, the neck extending from the lower side of the substantially flat head portion at a substantially right angle with respect to the substantially flat head portion;

5 (c) two substantially flat legs extending from the neck, each leg having an inner surface, the two inner surfaces of the two legs being at an initial proximity with each other, the legs being expandable in opposite directions upon inserting through the first hole an expansion member, thus bringing the expansion member to a contact region of the legs, each leg also having side leg  
10 portions;

(d) a funnel configuration in the vicinity of the contact region; and

(e) barbs having a front point and an origin at a region selected  
15 from the lower head side, the side neck portion, and the side leg portion, the barbs being directed outwardly away from the legs and then inwardly toward the legs.

20 47. A fastener comprising:

(a) a substantially flat head portion comprising a first hole, the flat head comprising at least a lower side;

25 (b) a neck having an opening and two side neck portions, the neck extending from the lower side of the substantially flat head portion at a substantially right angle with respect to the substantially flat head portion;

(c) two substantially flat legs extending from the neck, each leg  
30 having an inner surface, the two inner surfaces of the two legs being at an initial proximity with each other, the legs being expandable in opposite directions upon

inserting through the first hole an expansion member, thus bringing the expansion member to a contact region of the legs, each leg also having side leg portions;

5 (d) a funnel configuration in the vicinity of the contact region;

(e) at least one high barb having an origin at a region selected from the side neck portion, and the side leg portion, the at least one high barb also having a front point which front point substantially reaches or exceeds the lower side, the at least one high barb directed outwardly away from the legs; and  
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f) at least one low barb having an origin at a region selected from the side neck portion, and the side leg portion, the at least one low barb also having a front point which front point reaches lower than the lower side, the at least one low barb directed outwardly away from the legs.  
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48. A vehicle comprising an assembly of a first part with a slot, and a fastener within the slot, the fastener comprising:

20 (a) a substantially flat head portion comprising a first hole, the flat head comprising at least a lower side;

(b) a neck having an opening and two side neck portions, the neck extending from the lower side of the substantially flat head portion at a substantially right angle with respect to the substantially flat head portion;  
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(c) two substantially flat legs extending from the neck, each leg having an inner surface, the two inner surfaces of the two legs being at an initial proximity with each other, the legs being expandable in opposite directions upon inserting through the first hole an expansion member, thus bringing the expansion member to a contact region of the legs, each leg also having side leg  
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portions;

(d) a funnel configuration in the vicinity of the contact region;

5 (e) at least one high barb having an origin at a region selected from the side neck portion, and the side leg portion, the at least one high barb also having a front point which front point substantially reaches or exceeds the lower side, the at least one high barb directed outwardly away from the legs; and

10 f) at least one low barb having an origin at a region selected from the side neck portion, and the side leg portion, the at least one low barb also having a front point which front point reaches lower than the lower side, the at least one low barb directed outwardly away from the legs.